

Abstract

1 The present invention is an interface between a piece of
2 baggage and a preconcentrator. The baggage-preconcentrator
3 interface is able be secured to the opening in the baggage, such
4 as an opening created by a zipper. The baggage-preconcentrator
5 interface provides a convenient entry point from which to
6 extract air from the interior of baggage. The shape of such
7 interface corresponds to that of the preconcentrator, which
8 collects constituents of air. The preconcentrator is inserted
9 into the baggage-preconcentrator interface and an air sample is
10 extracted from the interior of the baggage and through both the
11 interface and the preconcentrator. As the air is extracted, the
12 constituents of air collect in the preconcentrator. After
13 collecting the constituents, the preconcentrator is inserted
14 into a testing unit capable of detecting trace amounts of
15 explosives, such as an ion trap mobility spectrometer. The
16 testing unit analyzes the constituents and determines whether
17 any of them are explosive.